

综述评论

FRP疲劳累积损伤理论研究进展

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摘要 纤维增强树脂复合材料(FRP)已成为高性能结构的先进材料。本文对FRP疲劳累积损伤理论作了详细的回顾,它们可分为剩余寿命模型、剩余刚度模型、耗散能模型、Markov链模型和其它经验公式。还用两个大样本实验数据对这些模型作了分析对比,结果表明:除Yao和Himmel的剩余强度模型略优一些,其它模型则与传统的Miner模型不相上下。

关键词 [FRP](#) [累积损伤理论](#) [疲劳](#)

分类号

PROGRESS OF THE FATIGUE DAMAGE CUMULATIVE RULES OF FRP

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Abstract

In this paper the fatigue damage cumulative rules of fibre-reinforced plastics (FRP) are reviewed and discussed. These rules can be classified as the residual life model, residual strength model, residual stiffness model, dissipational energy model, Markov-chain model and other empirical models. Two sets of experimental data have been employed for the comparison between experiment and prediction given by different models. The results show that the prediction capacity of the models is not better than that of the traditional Miner rule, with the model presented by Yao and Himmel little better than others.

Key words [FRP](#) [damage cumulative rule](#) [fatigue](#)

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